

Work Order ID 77286

December-01-11 12:52:00 PM

77286

Page 1

Item ID: D2574 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle, Aft In 205
Start Date: 01/12/2011 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 21/12/2011 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: M.L.J Date: 11/12/01 Tooling: * Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2574	Rev E

100
100
HAAS CNC VERTICAL MACHINING #1
HAAS CNC vertical machine #1
0.00
OK / PR 11-12-23
12 ϕ

Memo

Program Batch No. 77286 Double check by: REL 1-Machine Step
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-
Machine Step No 3 per Folio FA051 and insp.

110
110
Mill Conv
Conventional Milling Machine
0.00
OK / PR 11-12-23
12 ϕ

Memo

Machine keyway as per dwg D2573 & D2574

120
120
QC
Quality Control
0.00
OK / PR 11-12-23
12 ϕ

Memo

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77286

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December-01-11 12:52:00 PM

Item ID: D2574 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, Aft In 205
 Start Date: 01/12/2011 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 21/12/2011 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130	QC8- Inspect parts - second check	0.00	B.A	11/12/28		12	0		
130									
QC	Memo	0.00							
Quality Control									

140	Chemical Conversion Coat per QSI005 4.1	0.00	M-11/12-28			12			
140									
HandFinish	Memo	0.00							
Hand Finishing									

150	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
150									
Powdercoat	Memo	0.00							
Powder Coating									

START TIME: 8:00 FINISH TIME: 8:30
 320 OF

12 x 12 M-12/01/02

M-11/12/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77286

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Page 3

December-01-11 12:52:00 PM

Item ID: D2574 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, Aft In 205
 Start Date: 01/12/2011 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 21/12/2011 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00							
Quality Control									
170	Identify as per dwg & Stock Location: <u>651434</u>	0.00							
170									
Packaging	Memo	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

12/1/12

M.L.J 12/01/02

CK 12/01/03

MF
12-01-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-01-11 12:52:05 PM

Page 1

Work Order ID: 77286

77286

Parent Item: D2574

D2574

Parent Item Name: Saddle, Aft In 205

Start Date: 01/12/2011

Required Date: 21/12/2011

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev: I As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6101-005

Manufactured

No

110

Each

30.0000

1

12

D6101-005

**

29 11.12.13

Saddle Billet

Location

Loc Qty

Loc Code

MAT041

2

71721

2

MAT045

17

73420

16

74507

1

MAT046

11

66966

3

74507

8

1
4
7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	77286
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.438	0.443		.440	.440	.440	.440		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.001	8.003	8.003	8.003		
F	0.490	0.510		.500	.500	.500	.500		
G	0.257	0.262		.259	.257	.257	.257		
H	0.375	0.380		.377	.375	.375	.375		
I	0.490	0.510		.500	.501	.501	.501		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.568	.568	.568	.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.126	.126	.126	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.252	.252	.252	.252		
S	0.115	0.135		.126	.128	.128	.128		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		.236	.240	.240	.240		
W	0.115	0.135		.135	.135	.135	.135		
X	0.307	0.312		.311	.311	.311	.311		
Y	0.760	0.765		.764	.764	.764	.764		
Z	0.352	0.372		.364	.370	.370	.370		
AA	0.470	0.530		.500	.50	.50	.50		
AB	0.615	0.635		.626	.626	.626	.626		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.247	.249	.249	.249		
AE	1.500	1.520		1.514	1.513	1.513	1.513		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.270	.270	.270	.270		
AH	0.240	0.260		.246	.248	.248	.248		
AI	2.000	2.020		2.006	2.004	2.004	2.004		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by: RF
Date: 11.12.23

Audited by: BA
Date: 11/12/20

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	77286
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				15	16	17	18		
A	0.438	0.443		.440	.440	.440	.440		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.001	8.001	8.001	8.001		
F	0.490	0.510		.500	.500	.500	.500		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.499	.499	.500	.499		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.567	.567	.568	.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.126	.126	.125	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.251	.251	.251	.251		
S	0.115	0.135		.130	.128	.129	.129		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.229	3.229		
V	0.230	0.250		.239	.239	.239	.239		
W	0.115	0.135		.134	.130	.134	.134		
X	0.307	0.312		.311	.311	.312	.312		
Y	0.760	0.765		.764	.764	.764	.764		
Z	0.352	0.372		.364	.364	.364	.364		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.625	.625	.625	.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.249	.249	.248	.248		
AE	1.500	1.520		1.511	1.511	1.5115	1.5115		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.270	.270	.275	.275		
AH	0.240	0.260		.249	.249	.249	.248		
AI	2.000	2.020		2.003	2.003	2.0035	2.003		
AJ	0.023	0.043							
Accept/Reject									

Measured by: <i>aml</i>	Audited by: <i>KA</i>
Date: 11/12/24	Date: 11/12/28

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order:	77286
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	19	210	211	212	By	Date
A	0.438	0.443		.440	.440	.440	.440		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.001	8.001	8.001	8.001		
F	0.490	0.510		.500	.500	.500	.500		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.499	.499	.499	.499		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.567	.567	.567	.567		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.126	.126	.126	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.251	.251	.251	.251		
S	0.115	0.135		.130	.130	.130	.130		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		.239	.240	.240	.240		
W	0.115	0.135		.134	.134	.134	.134		
X	0.307	0.312		.311	.311	.312	.312		
Y	0.760	0.765		.764	.764	.764	.764		
Z	0.352	0.372		.364	.364	.364	.364		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.625	.625	.625	.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.249	.249	.249	.249		
AE	1.500	1.520		1.511	1.513	1.513	1.513		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.270	.270	.270	.270		
AH	0.240	0.260		.249	.249	.249	.249		
AI	2.000	2.020		2.003	2.003	2.003	2.003		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by:	RR
Date:	11.12.28

Audited by:	h.a
Date:	11/12/28



Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

WITHOUT NOTICE
WORK ORDER M.C.J.
NO. 77286
11/12/01

05.12.06

MATERIAL: 7075-17351 (QQ-A-250/12)
(REF DART SPEC. D6102-001)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- △E

DESIGN	DRAWN BY	 DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA	
DS	PH	DRAWING NO.	REV. E
CHECKED 	APPROVED 	02573	SHEET 1 OF 1
DATE	TITLE		SCALE
05.07.13	OUTER AFT SADDLE		2:3

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DART AEROSPACE LTD.

DART AEROSPACE LTD.
MANITOULIN, ONTARIO, CANADA

REV F

SHEET 1 OF 1

SCALE
2:3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector


Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____





NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

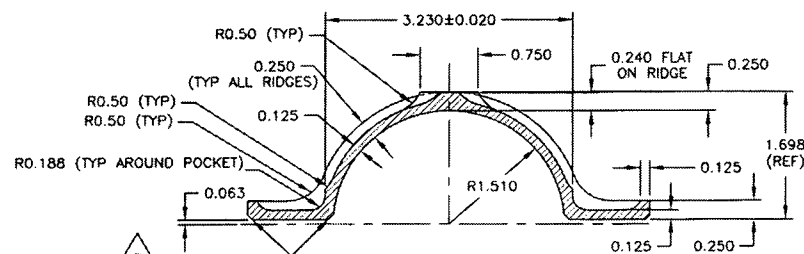
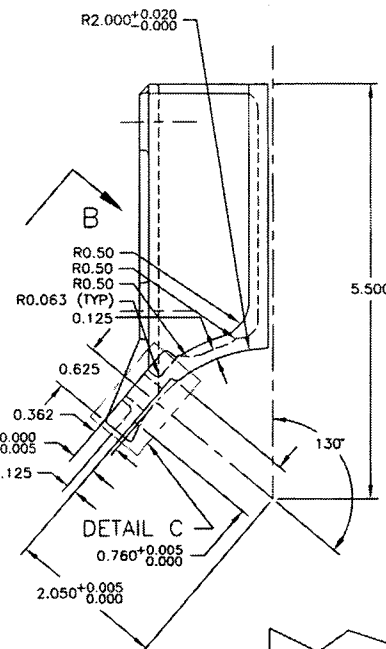
NOTE: Date & initial all entries

WITHOUT NOTICE
WORK ORDER
NO. 77286 M.C.J.
11/12/01

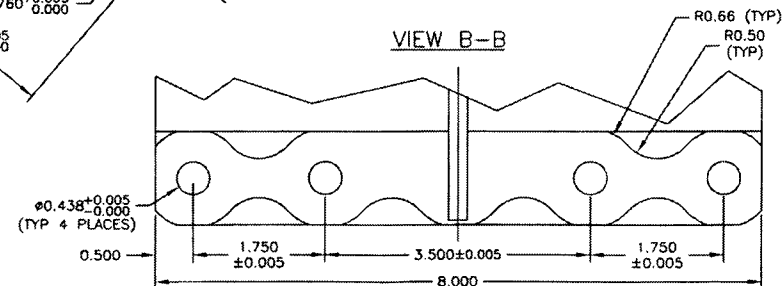
05.12.06 

MATERIAL: 7075-T7351 (QQ-A-250/12)
(REF DART SPEC. D6102-003)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

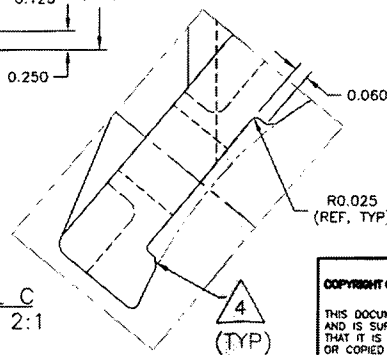
- | | |
|---|--|
|  | ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010 |
|  | CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES) |
|  | CHAMFER 0.063 x 45° ALL AROUND |
|  | CHAMFER 0.033 x 45° (SEE DETAIL C) |






SECTION A-A



VIEW B-B



DETAIL C
SCALE 2:1

E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCRP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN DS		DRAWN BY PH
CHECKED 		APPROVED 
		 DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA
DATE 05.07.13		DRAWING NO. D2574 TITLE INNER AFT SADDLE
		REV. E SHEET 1 OF 2 SCALE 2:1

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries